

FARLEY
EXHIBIT H

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, Volume LXI, Number : Pages 99-100
Dec. 12, 1913.

TUBERCULOSIS ACQUIRED THROUGH RITUAL CIRCUMCISION

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Tuberculosis by direct wound inoculation while not a frequent method of contracting the disease has yet occurred often enough to demonstrate the fact that this is a real danger. In 1887 Willy Meyer collected reports of a number of such instances and added a report of a case of his own of tuberculosis acquired through ritual circumcision. Since that time many additional observations on this subject have been published but only two, so far as I am aware—one by Ware and one by Sara Welk-Kakels—in this country. From inquiries, however, I am led to the opinion that many cases occur which do not find their way into print.

REPORT OF CASE

The report herewith presented is of more than ordinary interest by reason of the virulence of the infection as shown by the wide-spread lesions and the fact that the death occurred at an earlier age than in any case of which I have found a record.

History.—On February 24 of this year there was admitted to the Babies' Hospital an infant 3 mos of age with an extensive ulceration of the penis. The child was one of seven, four of whom were dead from various acute diseases. The parents were healthy as were the other living children. There was no evidence of syphilis or tuberculosis in the family. The infant at birth was a large child, reported to have weighed 11 pounds, and had been breast-fed up to the date of admission. When eight days old the operation of ritual circumcision had been performed, the blood being sucked up in the usual manner. The wound did not heal properly and at the end of a week suppuration was present and ulceration followed which began in the prepuce and gradually extended, up to the time the child was brought into the hospital. About two weeks after operation swellings of lymph-nodes in the groin were observed and these also had steadily increased in size although showing no tendency to suppuration. The digestion had been good and the nutrition well preserved until the last three weeks, during which there had apparently been a steady loss in weight, refusal of food, and slight fever and cough. There was also a discharge from one ear and from the nose. Four or five days previously a scanty maculovesicular eruption had been observed over the trunk and extremities.

Examination.—A well nourished, normally developed infant was found, weighing 11 ½ pounds, who did not appear acutely ill. Scattered over the body there were fifteen or twenty lesions which closely resembled those of varicella. Two or three were found on the scalp and several over the neck, shoulders, trunk and thighs. None were seen on the hands or feet and none on the mucous membranes. They were all very similar in character, from 3 to 4 mm. in diameter, vesicular at the periphery and crusted at the center, giving a somewhat umbilicated appearance. A very narrow zone of redness surrounded the lesions. Apparently there was no itching as they had not been injured by scratching. Elsewhere the skin, including that of the palms and soles was quite normal. Many râles were present over both lungs, but there was no signs of consolidation present.

The heart was normal. The abdomen was moderately distended. The spleen was much enlarged, reaching fully two inches below the costal margin. The liver was also markedly enlarged, its lower border being three inches below the costal margin. In the inguinal region, both sides, was a chain of large nodular swelling about the size of the last phalanx of the little finger. No signs of suppuration were present. The penis showed complete destruction of the skin by ulceration quite to the abdominal wall and to the base from which pus was freely discharging. At the meatus was quite a deep ulceration producing an appearance resembling a slight hypospadias. The tuberculin skin test gave a strongly positive reaction. Tubercle bacilli were found in the discharge from the penis, in the sputum and in scrapings from the cutaneous lesions described. The bacilli from the ulcers of the penis were carefully differentiated from smegma bacilli.

Course of Disease.-The child lived sixteen days after admission. During this period there was a constant temperature usually varying between 99 and 101 F. but occasionally going to 102 or 103. There was progressive weakness, steadily increasing cough and râles throughout the chest. The glandular swellings in the groin became larger but did not soften. The other external lymph-nodes were not enlarged. The blood examination at date of admission showed a leukocytosis of 16,000.; polymorphonuclears 85 per cent.; lymphocytes 14 per cent.; hemoglobin 65 percent. Just before death the leukocytes increased to 24,000 and the polymorphonuclears to 92 per cent. No cerebral symptoms were present, but there was considerable restlessness and lumbar puncture was made two days before death. A clear fluid under normal pressure was obtained which gave a faint globulin reaction and showed an excess of cells-twenty to the cubic millimeter. The skin lesions present on admission dried up slightly during the period of observation but no new ones appeared. Death occurred from exhaustion.

Necropsy.-Body well nourished, the lesions on the skin still showing.

Brain: Three or four military tubercles were seen over the base and a few over the convexity, but the ventricles were not distended and no evidences of meningitis were present.

Lungs: The pleura was not adherent; both lungs were everywhere studded with military tubercles and small tuberculous nodules. Considerable bronchitis but very little pneumonia was present. The lungs looked much as if they had been infected by a syringeful of tubercle bacilli injected into the trachea. No part of the lungs had escaped. The bronchial and mediastinal lymph-nodes were caseous but not very large, none being over 1½ cm. in diameter, and none showed softening.

Heart: A small yellow tubercle was seen on the coronary artery about its center. A tuberculous nodule, 2 mm in diameter, was found in the wall of the right ventricle, and another smaller one in the wall of the right auricle near the entrance of the superior vena cava. This involved the pericardium, endocardium and cardiac muscle and was cheesy.

Abdomen: The parietal peritoneum was studded with military tubercles and tuberculous nodules, especially over the diaphragm. The spleen measured 8 by 4.5 cm., and on the surface showed many tuberculous nodules in moderate numbers, chiefly in the cortex. Both adrenals contained tuberculous nodules, one of which was caseous. Two similar ones were found in the pancreas. The stomach and duodenum were normal, but throughout the rest of the small intestine were great numbers of tuberculous ulcers some of which extended quite to the peritoneal coat. There were large tuberculous ulcers in the cecum and throughout the colon, even in the rectum.

The mesenteric lymph-nodes were 3cm. in length and 1.5 cm in breadth. They were caseous but not softened. Extending upward from these was a chain of large caseous retroperitoneal lymph-nodes which followed the iliac arteries and then the aorta. One of the iliac arteries contained a cheesy lymph-node in its adventitia. The tuberculous character of this lesion was confirmed by microscopic examination. Three tubercles were seen on the mucous membrane of the bladder near its base. Both middle ears contained pus.

An opportunity was given to examine the man who had performed the operation. He was a pale, thin, almost emaciated individual, who looked decidedly tuberculous although no physical signs of the disease in his lungs could be detected. In his sputum two acid-fast bacilli were found which looked like tubercle bacilli.

This case seems complete and the evidence of infection through the circumcision wound, conclusive. A healthy child, born of healthy parents, breast-fed, developed local symptoms of infection within a few days after the operation and these persisted, being followed after a few weeks by signs of general infection which continued until death. The lesions found at necropsy point strongly to a spreading of the infection through the lymphatic system beginning from the wound, and afterward to a general blood infection. At death, which occurred when the child was 3 1/2 months old, practically every organ in the body was involved. Specially worthy of note in the lesions are the myocardium; the latter lesion I have seen but once before; also the tuberculides of the skin, a lesion which I believe is often overlooked; it has been observed at the hospital in two other cases during the present season, both patients being young infants.

A search through the medical literature brings to light a considerable number of examples of tuberculosis spread by means of ritual circumcision. In all I have collected with the assistance of Doctors Alan Brown and Stafford McLean, references or reports more or less detailed of forty other cases. These are of sufficient interest to make brief summary desirable.

SUMMARY OF LITERATURE

LINDMANN's¹ CASES: Two cases. The operation was done in the usual manner, the operator sucking the wound; one child died and the other recovered after a long illness. In both cases tuberculous ulceration occurred followed by caseous degeneration of the inguinal lymph-nodes. Ages of children are not given; the operator died two months after performing the operation, presumably of tuberculosis.

LEHMANN's² CASES: Ten children with almost identical symptoms infected by the same operator. The operator subsequently died of tuberculosis. The wound was sucked in the usual manner. The early signs were similar-irregular, grayish preputial ulcers which gradually extended. After two or three weeks there was swelling of the inguinal lymph-nodes which in most cases suppurred. No microscopic examinations were made, the diagnosis resting on the clinical symptoms.

ELSENGERO's³ CASES: One case in full. The first diagnosis made was syphilis. Subsequently the patient developed suppuration of the inguinal lymph-nodes and afterwards erysipelas. Tubercle bacilli were found in the sputum of the operator. The author reports that he has seen three similar cases but gives no details.

EVE's⁴ CASES: One case in full. Infant 5 months old, admitted with suppurative inguinal adenitis (double) and preputial ulcers. Ritual circumcision had been done on the eighth day. A few weeks afterward inguinal glandular swellings were noticed, which steadily increased. Abscesses were opened and curetted. Sinuses followed which still were present at 8 months. At 10 months the child was well. Pus from inguinal glandular lymph-nodes injected into guinea pigs produced tuberculosis. Operator died from tuberculosis seven and a half months after the circumcision. He did not suck the wound in this case but merely ejected some wine from his mouth over it. Author refers to another similar case but gives no details.

DEBROVITZ's⁵ CASES: Infant 7 months old had multiple ulcers of the prepuce with extensive

ulceration of the meatus. Inguinal lymph-nodes were much swollen. Subsequently they broke down and were incised. At 12 months of age wounds healed; patient was regarded as well. Operator was examined and found to be tuberculous; he rinsed his mouth with red wine before sucking the wound. The writer refers to three other cases but gives no details.

GESCHEIT's⁶ CASES: Five cases with similar clinical symptoms. Details of one case given. Patient's age 8 months. Circumcision on the eighth day. Wound healed in ten days except a dorsal preputial ulcer. There was edema of the parts. Inguinal lymph nodes swelled to size of pigeon's egg. Syphilis was suspected. Antisyphilitic treatment was used without success. All five cases occurred in healthy families. Three children died within six months of meningitis and enteritis; two at 7 and 8 months were living at the time of the report. All showed evidence of a primary local lesion. The operator was "thoroughly tuberculous" and had long been ill. Although he had done many previous operations these were the first infants known to have been infected. The author does not state how the diagnosis was made in his cases.

WILLY MEYER's⁷ CASE: Infant 12 months old. Family healthy. Only child. Circumcised on eighth day by an old man. At 4 weeks inguinal swellings were noticed and syphilis was suspected. Mercurial treatment was begun. At 4 months ulcer was noted on the frenum. Moderate inguinal adenitis was present. Syphilis was still regarded as the diagnosis and treatment continued. There was no improvement under syphilitic treatment. Inguinal lymph-nodes subsequently broke down and were curetted. Tubercle bacilli in great numbers were found in the pus. Subsequent history not given.

HOFMOKL's⁸ CASE: Infant, 8 months old. Family healthy. The early symptoms identical with those in the other cases reported. Syphilis suspected and for a long time antisyphilitic treatment continued without success. Inguinal lymph-nodes subsequently extirpated; found caseous. Diagnosis established by microscopic examination.

KOLIZEW's⁹ CASES: Seven cases of tuberculosis of the penis are reported following circumcision by a rabbi suffering from tuberculosis. Two patients died; two made partial recovery; two were lost sight of, and one recovered. In only one of the families was there tuberculosis. Arluck and Winocouroff state that this report led to a movement of far-reaching social effect for the reformation of the performance of ritual circumcision.

WARE's¹⁰ CASE: Infant, 3 months old. Parents healthy. Ritual circumcision done at one week. Two weeks later inflammation of the prepuce. Swelling of inguinal lymph-nodes, both sides, first seen at 4 weeks. Preputial ulceration with moderate secretion also present. Syphilis suspected. Antisyphilitic instituted but without benefit. Lymph-nodes broke down and were curetted. Tubercle bacilli not found, but microscopic examination of the lymph-nodes showed giant cells and tuberculosis was diagnosticated. Case passed from observation.

WELT-KAKELS¹¹ CASE: Infant, 6 months old. Healthy parents. Circumcision the ninth day by man presumably tuberculous. Wound sucked. Inguinal adenitis observed at the end of four weeks followed by suppuration. Tubercle bacilli found in the pus. Von Pirquet test positive. Lymph-nodes removed.

At four years of age the child was reported by the writer to be living, but, from physical appearance, was regarded as still suffering from tuberculosis.

J. M. T. FINNEY's¹² CASE: Infant came under observation "some months after the circumcision" with local ulceration and enlargement of inginal lymph-nodes. Tubercle bacilli in large numbers were obtained from the scrapings. Ulcerated areas were curetted. Inguinal lymph-nodes were excised, both sides. Bacilli were found in the lymph-nodes. Subsequently tuberculosis of the one knee developed. The patient was under observation many years and is reported never to have any

other evidence of tuberculosis. Investigation by the family revealed the fact that "several other children," all of whom had been circumcised by the same man, had been similarly infected. He is stated to have been definitely tuberculous. The parents reported that he spat on a clothe which was used as a dressing for the wound after operation.

ARLUCK AND WINOCOUROFF'S¹³ CASES: Infant of 5½ months. Parents healthy. Circumcision on eighth day. Wound was sucked by local ulceration, swelling and breaking down of inguinal lymph-nodes. The child wasted with signs of generalized tuberculosis. The entire penis ulcerated quite to the scrotum. There was great enlargement of inguinal lymph-nodes. Wassermann was negative; also the von Pirquet test, the latter thought to be due to the wide-spread infection. One tubercle bacillus was found in scrapings from the preputial ulcer. Death occurred four days later. Necropsy showed general tuberculosis involving lungs, intestines, spleen, mesenteric and inguinal lymph-nodes. The infection was believed throughout the lymphatic system.

Of the forty-one patients, including my own, sixteen are known to have died; seven are reported as having partially recovered or being scrofulous; in twelve the final results are not given; and only six are stated in the histories to have recovered. The youngest fatal case is that of the patient whose history I have reported. In several cases death has occurred as late as 11 months from tuberculous meningitis. The usual cause of death has been general tuberculosis. In many of the reports several children have been infected by a single operator. Thus, in Lehmann's cases, all ten of the children were thus infected; Gescheit reports four infants infected by the same operator; Lindmann, two patients, Debrovitz, four patients. In nearly all the reports the fact is stated that the families were free from tuberculosis. As a rule the earliest symptoms of infection have been observed in about a week after the operation. The wound does not heal, but suppuration occurs and ulceration soon follows. The early ulcer may be anywhere on the prepuce but is often on the frenum. It may remain as a localized process or be general. At the end of a second or third week inguinal adenitis develops. In a considerable number of cases it is reported that the lymph-nodes broke down and abscess formed, usually in two or three months after the initial infection. The cases in which early suppuration of the inguinal lymph-nodes took place and which were operated on, either by removal or curetting, were among those in which the results were the best. The symptoms of a wide-spread general infection rarely occurred earlier than the third or fourth month.

The diagnosis has been made in many of the cases by the clinical symptoms and history alone. Some of these were reported before systematic search for the tubercle bacillus in wounds was practiced or modern tuberculin tests were employed. In nearly all of the later cases reported, the diagnosis has been established by the discovery of the bacilli in the inguinal abscesses, sometimes from the preputial ulcers. In the latter situation they must be carefully differentiated from smegma bacilli. That the infection spreads through the lymphatic system seems certain and early removal of the inguinal lymph-nodes would therefore appear to be the most important measure to be employed in checking the extension of the infection. To be successful this must of course be done early.

In a very large proportion of the cases reported the first diagnosis made was syphilis, and the patients were treated for weeks and months by antisyphilitic measures without benefit and with loss of valuable time. It is my own belief that syphilis is less frequently acquired in this manner than is tuberculosis and the latter disease should be first suspected. With the modern means of diagnosis in tuberculosis the early recognition of these cases ought not to be difficult. While the number of reported instances of tuberculosis acquired through circumcision is considerable there must be a much larger

number that have never found their way into literature. It is certain also that syphilis has been spread in this manner. These facts lead me to emphasize the statement made by the late Professor Maas, the German surgeon, that "it is the duty of physician to raise his protest against the performance of ritualistic circumcision in every case."

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Citation:

- Holt LE. Tuberculosis acquired through ritual circumcision. *JAMA* 1913;LXI(2):99-102.

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were two separate gonads. Scar tissue may have fused two discrete organs together. The arrangement of the tissues, and especially of the excurrent ducts of the testis, however, strongly indicated that this structure was actually an ovariotestis. Likewise it was impossible to determine if this ovariotestis was a part of the ovariotestis removed at the previous operation.

In the 3 years elapsing between removal of the first tissue and that described here, the testis had undergone little development. The tubules were larger but had not undergone much cytological development. Such developmental change would be unlikely in a cryptorchid testis sealed in the inguinal canal. The interstitial cells had increased in size and number, and in this specimen appeared to be actively secreting cells.

In the ovarian tissue removed at the first operation, large growing follicles were found. In the present specimen large follicles were present, but they were deformed and atretic.

It is probable that the right gonad, which revealed only testicular tissue on biopsy may have been a mosaic ovariotestis. The normal development of adolescence permitted the ovarian elements of this gonad to develop rapidly, resulting in the growth of the breasts.

The testis had not developed much beyond the condition of 2 years previous. Its position in the inguinal canal would prevent any possible spermatogenic maturation.

ADDENDA

After the removal of the second ovariotestis, the breasts showed no involution. The breasts had grown so large and the areolae so wide that it was deemed advisable to do bilateral mastectomies in view of the well-fixed masculine conditioning which the child presented. Accordingly, 11 months later, in December 1945, Dr. Jerome Webster removed 250 gm. tissue from the left breast, and 200 gm. from the right breast. Sections showed a number of moderately dilated ducts lined with tall columnar epithelium, but not acini. The most of the tissue was fat.

SUMMARY

A case of true hermaphroditism in an 11-year old patient was reported previously. A normal ovary was found on the left side. A testis and an ovariotestis were found on the right side. The duct systems were represented by both Wolffian and Müllerian elements.

More than 2 years later the right gonad which had been translocated to the lower right inguinal canal had greatly increased in size and was tender. The breasts were greatly developed.

The gonad was removed and was found to consist of large follicles with ova and seminiferous tubules, with rete testes and efferent tubules. Interstitial cells were numerous and apparently secretory.

It is thought probable that the right gonad was a multiple structure containing both ovary and testis.

TUBERCULOSIS OF THE PENIS: A REPORT OF 5 NEW CASES, AND A COMPLETE REVIEW OF THE LITERATURE

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Tuberculosis of the penis is a rare clinical entity. In 1803 Bayle in France first wrote that tuberculosis was not exclusively a pulmonary lesion but also involved different parts of the genito-urinary system. In 1870 Solowetschnick wrote the first observation of tuberculous ulceration of the glans. This was in a patient who also had other genito-urinary lesions. In 1878 Fournier described the first case of primary tuberculosis of the penis.

Two types of tuberculosis of the penis have been recognized: 1) that which is secondary to other lesions in the genito-urinary system (a) upper tract (b) genital tract and (c) both; and 2) that which is primary, i.e. no other source of tuberculosis in the body is present. There have been only 3 cases reported in which the penis became involved following pulmonary tuberculosis without there being some other genito-urinary focus first.

Tubercle bacilli may involve the skin, urethra, or cavernous bodies. Tuberculous cavernitis is a very rare disease and is not included in this paper except where it might arise secondarily to skin tuberculosis.

The urethral mucosa is remarkably resistant to the tubercle bacilli, which may pass through it for years without producing clinically recognizable lesions (Young). Even so tuberculosis of the urethra is a more common disease than that of the penis, being present in 2.6 per cent of the cases of upper tract tuberculosis in our files, whereas penile tuberculosis is just less than 1 per cent. But it is tuberculous ulcerations of the penis that we are interested in at this time.

In a comprehensive review of the literature there have been found 110 cases of penile tuberculosis. Of these 89 are primary, 9 not stated, 8 secondary, 1 undetermined, and 3 hematogenous (table 1).

Of the 89 primary cases, 72 are the result of ritual circumcision in Jewish infants. The actual incidence of tuberculosis of the penis following this rite was much higher than a review of the literature would indicate. Part of the ritual consisted of the Mohel sucking the circumcized penis in the act of the Mezizah. The purpose of this act, which was compulsory, as described in the *Camera* by Rev. Rav. Pope in the 5th Century and later by Joseph Karo and Maimonedge in the Beth Joseph of the 12th century, was as a hemostatic and styptic. Syphilis and diphtheria have also been contracted through this act. After the turn of the last century this act was practically eliminated from the ritual so that tuberculosis of the penis is seen only rarely now.

Of the other primary cases, 12 were definitely stated as being the result of coitus, 2 from non-ritual circumcision, 2 from buccal coitus and one from wearing infected clothing.

Of the secondary cases, 4 had tuberculous involvement of the genital system,

2 had renal involvement and in 2 both the urinary tract and the genital tract were involved. In these last 2 cases the urethra was also involved (table 2).

In the Brady Urological Institute we have seen 7 cases of tuberculosis of the penis. Two of these cases, G 47728 (J.H.H.) and 16488 (B.U.I.), have been previously reported by Frontz and McKay. The 5 other cases are here reported:

CASE REPORTS

Case 1. BUI 8937, N.C., a 24 year old colored male, came in with the chief complaint of a sore on his penis. His father died of tuberculosis. The family history was negative. Four years prior to admission the patient had noticed a

TABLE 1

Primary Cases.....	89
Ritual Circumcision.....	72
Coitus.....	12
Non-ritual Circumcision.....	2
Coitus per os.....	2
Infected clothes.....	1
Secondary Cases.....	8
Without urethral involvement.....	5
With urethral involvement.....	2
Not Stated.....	9
Hematogenous.....	3
Unable to determine.....	1
Total.....	110

TABLE 2

Secondary cases.....	8
Genital Tract.....	4
Prostate.....	1
Epididymis.....	2
Both.....	1
Urinary Tract.....	2
Genital and Urinary Tracts.....	1
Kidney, prostate, seminal vesicles and urethra.....	1
Kidney, epididymis and urethra.....	1

small abrasion on the frenulum following coitus. This did not heal but increased to the size of a dime. There was no pain or soreness. A dorsal slit was done because of phimosis and edema. The area of the ulcer increased until it surrounded the glans penis at the time of admission. Examination showed an ulcerated, foul, necrotic area surrounding the glans penis in the coronary sulcus. The edge was irregular and indurated. The base was clean except for a small area of necrosis. On the under surface of the shaft and distinct from the area surrounding the glans was an irregular ulcerated area the size of a silver dollar. A biopsy was taken which showed several giant cells with round cells, plasma cells and eosinophils. A diagnosis of tuberculous ulcer was made. No cultures or animal inoculation were made and no acid fast bacilli were searched for in the scrapings. Re-

peated Wassermann tests were negative, but there were no Frei or Ito tests made and no examination for Donovan bodies.

Case 2. BUI 1824, J.W.M., a 25 year old white male came to the clinic with the chief complaint of bleeding from the urethra. The family and past histories were non-contributory. Four years before admission he began to have pain behind the head of the penis on urination. A little later he noticed that he was passing fresh blood at the end of urination. Examination showed a meatus enlarged by an ulcer which was present on the inferior surface where it had destroyed the frenulum. The surface was grayish in color with a few granulations, and it extended 1 cm. up the urethra. There was induration for 2 cm. above this. There were enlarged glands in both groins. The prostate was enlarged and indurated at the apex. There was a nodule on the right side the size of a buck shot. The seminal vesicles were indurated and adherent. Cystoscopy showed bladder capacity of 200 cc. The bladder had irregular areas in which the mucous membrane was elevated, rough, red and in places covered by adherent exudate. These areas were hyperemic, surrounded by normal mucosa and were scattered over the base and on the lateral and anterior walls. A diagnosis was made of tuberculosis of the prostate and seminal vesicles and a tuberculous ulcer of the frenulum involving the urethra. The patient died of miliary tuberculosis 1 year later.

Case 3. BUI 29399, A.F., a 27 year old white man, complained chiefly of bleeding from the urethra. The family and past histories were non-contributory. Two months before admission, he had a slight bloody discharge from the penis. He denied gonorrhea and syphilis, and several serum tests for syphilis were negative. Examination showed that within the glans was an induration which was deep and associated with the urethra. It was symmetrical, a little irregular in outline and did not extend beyond the coronal margin. There was no obvious ulcer of the urethra. Biopsy was done and the report reads: "The section shows many tubercles, but it is not possible to say whether they are acid-fast or those sometimes seen in granuloma of venereal origin." The diagnosis was chronic inflammatory tissue with tubercles. The cultures were sterile; the Frei and Ito tests were negative. The clinical impression was that this was a tuberculous ulcer.

Case 4. W.E.B., J49702 (J.H.H.), a 29 year old single colored male, complained of a sore on the penis. The past and family histories were non-contributory. Two weeks before admission the patient noticed a small nodule on the corona of the glans which ulcerated and spread. Dark field examinations were negative on numerous occasions, as were blood Wassermanns. On examination the ulcer was shallow, round, and small on the dorsal surface of the corona. The base was grayish in color and the edges were indurated. There was some swelling of the inguinal lymph nodes on both sides. No urinary symptoms were present. The prostate, seminal vesicles and scrotal contents were normal. Urinalysis was entirely negative. The patient was treated with conservative therapy for 3 months during which time he was treated with anti-syphilitics without any improvement. On the contrary the lesion was getting larger. A biopsy was

taken and was reported: "Area of ulceration with marked inflammatory reaction. There is marked necrosis with round cell infiltration; several giant cells and tubercles are seen."

Case 5. B.U.L. 35919, W.L., was a 38 year old colored man whose family history was negative. The patient had gonorrhea in 1924. A left nephrectomy for tuberculous pyonephrosis was done on October 27, 1944. Follow-up on January 17, 1945 showed that the urine was still positive for Koch's bacillus. The patient did not return to the dispensary again until June 22, at which time he complained of a sore on his penis of 10 days' duration. Examination showed 3 punched out ulcers on the coronal sulcus, and one punched out ulcer on the glans. The edges were firm and indurated and the bases were clean. The ulcers seemed to coalesce and there was no pain or tenderness. A bilateral inguinal lymphadenopathy was noted. There was no urethral involvement. Conservative therapy consisting of hygienic cleanliness, soaks, and antiseptics had no effect. The serological test for syphilis was negative on several occasions as were the Frei and Ito tests. A careful search was made for Donovan bodies but was fruitless. On October 4, 1945 due to persistence of the lesion biopsy was taken. This was reported to show numerous giant epithelial cells with round cell infiltration and tubercle formation. There was slight caseation. Scrapings of the base of the ulcers, after careful preparation, were emulsified in saline and injected into guinea pigs. They were positive for tubercle bacilli. Due to upper tract infection operative treatment was felt to be inadvisable.

ETIOLOGY

As has been demonstrated, the penis may become infected with the tubercle bacilli through 3 sources: (1) hematogenous from lungs (2) direct contact and (3) following tuberculous infection of other organs in the genito-urinary system by one of the above methods or by some other method not demonstrated as yet.

The hematogenous route without involvement of other genito-urinary organs is an extreme rarity. In only three of the reported cases could this be given as the probable source.

The direct contact source is by far the most common. One can easily see how the bacilli could gain a foothold during circumcision but the contraction of the disease through coitus is another matter. The tubercle bacilli can be found in the vagina in cases of pelvic tuberculosis in women and even though cervical tuberculosis is a rare disease it has been seen and has been shown to be of primary origin as well as secondary. This being so, and the fact that the lesion appears around the corona and frenulum most commonly, leads one to speculate that the bacilli are inoculated in these points of irritation, the normal mucosa having been shown to be highly resistant. Brunati offered the theory that the bacilli were lying dormant in the body and with the lowered tissue resistance they were able to localize themselves at these points. This does not seem reasonable because there are many other places in the body where irritation is greater and the resistance should be lower.

The theory here proposed is that in these cases of so-called secondary tuberculosis the man with infected urine or ejaculum inoculates the vaginal vault of his

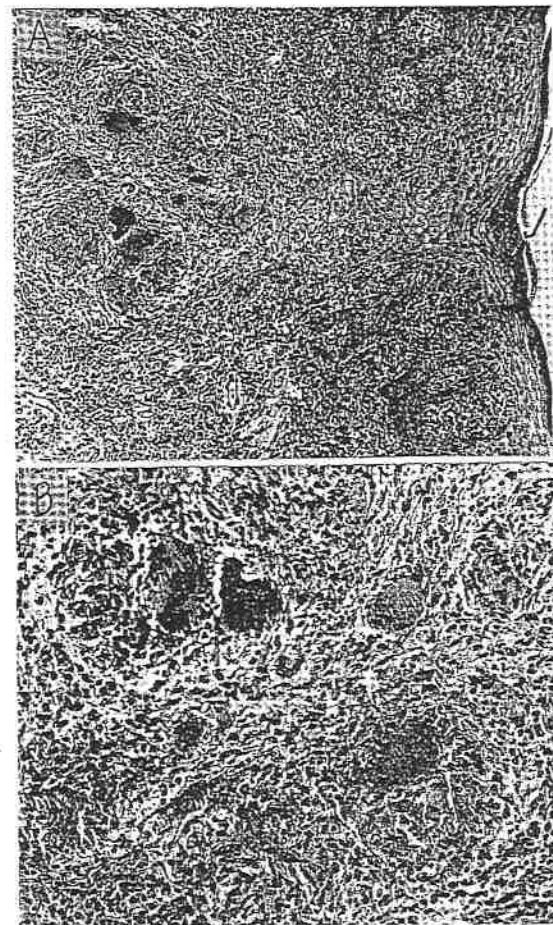


FIG. 1. Biopsy showing giant cells

partner. Then with irritation to the corona or frenulum, the exterior of the penis becomes infected. This is a theory of reinoculation and would tend to make primary cases out of some of those which are now thought to be secondary. This theory was original with Verneuil in 1883 but was somehow overlooked by later writers.

PATHOLOGY

There have been many descriptions in the literature of the typical lesion of tuberculosis of the penis. Brunati describes 3 periods in the development of the tuberculous ulcer. The first period is one of a tuberculous pustule, which he calls a "bouillon" or raised pimple. In this stage there is little or no induration. In the second period there is ulceration but still little or no induration. During these 2 stages the similarity to the early chancre of syphilis is quite evident. The third period is marked by a progression of the ulceration, and the presence of infiltration and induration around the edges. The base in the early stages of this period is usually clean and has the appearance of irregular granulation tissue. With extension of the lesion there is necrosis, the base becomes gray or yellow and usually there is secondary infection. There are usually 2 or 3 ulcers which tend to coalesce and spread until the whole corona may become infiltrated. With this there is a lymphadenopathy of the superficial inguinal lymph nodes.

There are many atypical forms which may be misleading. In one of the cases reported by Frontz and McKay the lesion spread to involve the whole penis and lower abdomen resembling granuloma inguinale. Hansteen's case started as a simple ulcer on the frenulum but later developed lymphangitis with a nodule on the dorsum of the penis in the middle of the shaft. This case is interesting in that the epididymis and kidneys became involved after the ulcer on the penis had been present for several months.

In the case of Gougerot and Fernet the lesion was a vesicular impetiginous ulcer resembling herpes and impetigo.

Perlis and others have presented cases of complete penile destruction and many of the cases, especially those following circumcision in children, have been fatal from a military spread.

DIAGNOSIS

The differential diagnosis of penile ulcers is not simple. There are many diseases to be considered, *viz.*; balanitis, herpes progenitalis, chancre, lactic chancre, epithelioma, carcinoma, gummatus ulceration, granuloma inguinale and leprosy. An excellent review of this phase of the subject is given in the articles by Lazarus and Rosenthal and by Brunati and will be dispensed with here.

Because of its rarity the diagnosis of tuberculosis should not be made until all other possibilities have been ruled out. The diagnostic proof should consist of smears stained for acid-fast bacilli, biopsy, and finally by animal inoculation. In only the last of the cases here presented was all this done.

TREATMENT

The treatment of penile tuberculosis has been most unsatisfactory. Suggested therapy has been, heat, light both ultra violet and infra-red, x-ray, various

TABLE 3

REFERENCE	CASES	Exposure
Wolfe.....	2	Circumcision
Arhuck.....	1	Circumcision
Zarubin.....	1	Circumcision
Lehman.....	10	Circumcision
Finkelstein.....	3	Circumcision
Hofmokl.....	1	Circumcision
Kolizew.....	7	Circumcision
Malecot.....	1	Circumcision
Holt.....	1	Circumcision
Lindemann.....	2	Circumcision
Eve.....	2	Circumcision
Moyer.....	1	Circumcision
Karewski.....	3	Circumcision
Fryney.....	1	Circumcision
Ware.....	1	Circumcision
Dobrovits.....	1	Circumcision
Gescheits.....	1	Circumcision
Porfis.....	1	Circumcision
Welt-Kukels.....	1	Circumcision
Elsenberg.....	4	Circumcision
Frontz and McKay.....	2	Coitus
Orlison.....	1	Coitus
Lousto, Cuillou, and Darquier.....	1	Coitus
Saifert.....	1	Coitus
Rose.....	1	Coitus
Prat and Lecene.....	1	Coitus
Michaut.....	1	Coitus
Sealstieff.....	1	Coitus
Tschleroff.....	1	Coitus
Lazarus and Rosenthal.....	2	Nou-ritual circumcision
Wilson and Warthin.....	1	Hematogenous
Wilson and Warthin.....	1	Coitus per os
Kraus.....	1	Infected Clothes
Wallart.....	1	Not stated
Babler.....	1	Not stated
Cowie.....	1	Buccal coitus
Weitzel.....	2	Not stated
Senn.....	1	Not stated
Wickham.....	1	Not stated
Fabry.....	1	Not stated
Barbet.....	1	Not stated
Brusko.....	1	Not stated
Louter.....	1	Not stated
Naggar.....	1	Prostatic tuberculosis
Noeggerath.....	1	Renal tuberculosis
Hunstein.....	1	Hematogenous
Gougerot and Fernet.....	1	Hematogenous
Brunati.....	1	Coitus
Sohledt.....	1	Unable to determine

TABLE 3 (concluded)

REFERENCE	CASES	EXPOSURE
Garin.....	1	Lung and epididymal tuberculosis
Schmitz.....	1	Epididymal tuberculosis
Frank.....	1	Prostate and epididymal tuberculosis
Ehrmann.....	2	Kidney, prostate and urethral tuberculosis
Bloch.....	1	Renal tuberculosis
		Renal, epididymal and urethral tuberculosis

chemicals, and surgical excision. None of these methods have proved to be a panacea. In some cases excision with the electric cautery can be done with some optimism for the patient, but the prognosis generally is quite poor.

SUMMARY

Tuberculosis of the penis is a rare disease. One hundred ten cases have been reported in the literature of which 72 were the result of ritual circumcision, leaving 38 cases from all other causes.

The disease may be primary or secondary. Primary where no other endogenous focus can be demonstrated and secondary to either lung and/or genito-urinary foci. The history, etiology, pathology, and diagnosis are discussed. Treatment has been rather unsatisfactory and the prognosis unfavorable. Five cases are reported from the Brady Urological Institute of which 3 are primary and 2 secondary.

A theory as to the mode of infection in so-called secondary cases is reiterated. This is the theory that most secondary cases are the result of reinoculation through coitus.

A complete review of the literature is presented.

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*Mezizah be-Peh—Therapeutic Touch or Hippocratic Vestige?*¹

By: SHLOMO SPRECHER

With the appearance of a news article in the mass-circulation *New York Daily News*² implicating *mezizah be-peh*³ in the death of a Brooklyn

¹ The author wishes to emphasize that he subscribes fully to the principle that an individual's halakhic practice should be determined solely by that individual's *posek*. Articles of this nature should never be utilized as a basis for changing one's *minhag*. This work is intended primarily to provide some historical background. It may also be used by those individuals whose *poskim* mandate use of a tube instead of direct oral contact for the performance of *mezizah*, but are still seeking additional material to establish the halakhic bona fides of this ruling. Furthermore, the author affirms that the entire article is predicated only on "Da'at Ba'alei Battim."

² February 2, 2005, p. 7.

³ I am aware that purists of Hebrew will insist that the correct vocalization should be *be-seh*. However, since all spoken references I've heard, and all the published material I've read, use the form "*be-peh*," I too will follow their lead. I believe that a credible explanation for this substitution is a desire to avoid the pejorative sense of the correct vocalization. Lest the reader think that Hebrew vocalization is never influenced by such aesthetic considerations, I can supply proof to the contrary. The *Barukh she-'Amar* prayer found in *Tefillat Shabat* contains the phrase "*be-seh 'Amo*." Even a novice Hebraist can recognize that the correct formulation should be in the construct state—"be-*fi 'Amo*." Although many have questioned this apparent error, Rabbi Yitzchak Luria's supposed endorsement of this *nusah* has successfully parried any attempts to bring it into conformity with the established rules of Hebrew grammar. However, this *nusah* appears originally only in French and German medieval manuscripts hundreds of years prior to the *AR"l*. The actual reason for this substitution, according to N. Wieder, the noted scholar of Jewish liturgy, is a desire to eliminate

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newborn, this component of a traditional *brit milah* entered its third century of controversy. But this time, given the potency of current mass media, the issue received far broader and more intensive coverage than ever in its previous two centuries. Also for the first time, the issue inserted itself into the electoral process—with the *haredi* community refusing to endorse Mayor Bloomberg for re-election until the New York City Health Commissioner agreed to an entente on this issue.⁴

placement of the phoneme “fi” juxtaposed to *Hashem* since “fi” was an expression of contempt in both Medieval French and German. Wieder’s essay is entitled “*Tikkunim be-Nusah ha-Tefillah be-Hashpa’at Leshonot Lo’aziot*” and is available in his collected articles entitled “*Hitgabshut Nusah ha-Tefillah be-Mizrah u-be-Ma’arav*,” pp. 469–491, see especially p. 480 and p. 486, Jerusalem: 1998. (For the remainder of the article, the acronym MBP will be used interchangeably with the full phrase *mezizah be-peh*.)

⁴ An extensive analysis of this aspect of the controversy can be found in an unusually candid article by Chaim Dovid Zwiebel entitled “Between Public Health And Mesores Avos; An Inside Account of the *Metziza B’peh* Controversy,” which appeared in the April 2006 issue of *The Jewish Observer*, pp. 6–21. Although Zwiebel presents a critique of the conclusions reached by the authors of the paper in *Pediatrics*, “Neonatal Genital Herpes Simplex Virus Type I Infection After Jewish Ritual Circumcision: Modern Medicine and Religious Tradition,” B. Gesundheit, et al. (2004), and critiques as well Dr. Thomas R. Frieden (Commissioner, Department of Health and Mental Hygiene – City of New York), the article still confirms what had been suspected by those closely monitoring the *Haredi* response—there was a significant divergence between the Agudah’s position and that of the *Hasidic* leadership. He also airs a good deal of criticism directed at the tactics of the latter. To the best of my recollection, this appears to be a unique event in the history of that publication, which has often targeted those to the left of the Agudah, but has been reticent to criticize those to the right. The article also presents the most detailed discussion of the tragic events in the fall of 2004 that led to the intervention of the New York City Department of Health and its attempts to dissuade the *mohel* involved (Rabbi Fischer) from personally performing MBP. Had he voluntarily complied, as did another prominent *mohel* in 1998 who was associated with two cases of post-circumcision herpes, the entire controversy may have been avoided. Also evident to the careful reader

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Since there is an extensive secondary literature on *mezizah be-peh* that is readily available,⁵ there is little need to review the basic

is Zwiebel's dissatisfaction with some of the decisions made by Rabbi Fischer's advocates, as contrasted with the great personal esteem he has for Rabbi Fischer. Apparently, one such attentive reader is Rabbi M. Orbach, a Monsey-based rabbi, who issued a blistering attack on Zwiebel, accusing him (and implicitly, the Agudah leadership) of manifesting "Da'as Ba'alei Battim which is opposed to Da'as Torah." Incidentally, Rabbi Orbach is misquoting the original source of this phrase, which is a passage in the *Sm'a, Hoshen Mishpat*, 3:13 (who attributes it to the Mahari Weill), who actually wrote the following—*piskei ba'alei battim upiskei lomdim shnei bafochim heim*. The entire riveting correspondence can be found at yeshivaworld.blogspot.com.

⁵ For a comprehensive analysis of the early stages of the controversy see Jacob Katz's "Pulmos ha-Mezizah" in his collection of articles entitled *Halakha be-Mezar*, pp. 150–183, Jerusalem: 1992. A voluminous treatment of the material up to the beginning of the 20th century can be found in the "Kuntres ha-Mezizah" Volume 8 in the 1962 New York reprint edition of Rabbi C.C. Medini's *Sdei Hemed*, pp. 236–280 and 433–450. Contemporary material defending MBP can be found in the following three works: Rabbi Y. B. Goldberger's *Brit Kerutah le-Sfatayim*, Brooklyn, NY: 1990; Rabbi Abraham Cohn's *Brit Avraham ha-Kohen*, pp. 190–206, Brooklyn, NY: 1993; and Rabbi Menashe Klein's *Mol ve-Lo Por'a*, Brooklyn, NY: 2002, pp. 191–199. Particularly comprehensive is the section entitled "Milhemet ha-Mezizah" found in Y. D. Weissberg's *Ozar ha-Brit*, Volume 4, pp. 7–38, Jerusalem: 2002, which also presents opposing views fairly. Some excellent articles in English are also available: Dr. Y. P. Shields, "The Making of Metzitzah" in *Tradition*, volume 13, # 1 1972, pp. 36–48; A. Cohen, "Brit Milah and The Spectre of Aids" in *Journal of Contemporary Halachah*, Number XVII, Spring 1989, pp. 93–115; D. Shabtai and R. Sultan, "Medical Risk Taking in Halacha: A Case Study—Metzitzah b'peh" in *Journal of Contemporary Halachah*, Number LI, Spring 2006, pp. 12–43 (my thanks to the authors for allowing me to read their article prior to publication); Israel G. Hyman, "The Halakhic Issues of Mezizah," *Proceedings of the AOJS*, 8-9 (1987), pp. 17–44; Dr. Edward Reichman, "Metzitzah B'peh: A Medical Historical Note," *AOJS Intercom*, vol. xxv, issue 3, Fall 2005, pp. 1–2; Robin Judd, "German Jewish Rituals, Bodies and Citizenship," PhD. Dissertation, Univ. of Michigan 2000 (my thanks to Prof. Judd for sharing her thesis with me, which will be forthcoming as a full-length book); and "The Metzitzah B'Peh Controversy: A Historical &

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material here. This paper will focus instead on clarifying what I consider to be widely held misconceptions and errors disseminated by the proponents of *mezizah be-peh*.

The Rationale for *Mezizah be-Peh*

The entire Talmudic reference to the act of *mezizah* (note, the Talmud never specifies nor utilizes the term *be-peh*) consists of the following few lines of text. There is a Mishnaic dictum that reads: “We perform all the necessities of circumcision on *Shabbat*. We may circumcise, uncover and draw out.”⁶ Rav Pappa adds the following comment: “The expert surgeon who does not draw out is a danger.”⁷ The *Gemara* then questions the need for Rav Pappa’s comment—the Mishnah specifically allows the drawing out to be done on *Shabbat*, which entails a violation of Sabbath law, a waiver of which can be due only to circumstances of danger! The *Gemara* then explains that without Rav Pappa’s comment one might have interpreted the Mishnah’s statement about drawing out blood as referring **only to blood that had already separated** from the underlying tissue, an activity that does not involve a Sabbath violation. Rav Pappa’s clarification tells us that **the blood to be drawn out is still contained within the underlying tissue**, which does constitute a Sabbath violation of inducing a wound, but is nevertheless required to avert harm to the infant.

This Talmudic passage is codified by Rambam as follows: “One draws out the *milah* until the blood comes out of the distant places, so that no danger shall prevail.”⁸

What exactly is this danger referred to by the Talmud and the Rambam? Neither *Hasidim* nor Rambam feel any need to describe it, presumably because they assumed it would be obvious to any of their

Halachic Perspective,” Reviewed by Horav Yisroel Belsky, *Halacha Berurah*, Vol. 9, Issue 1, Fall 2005, pp. 1–6.

⁶ Talmud *Bavli*, *Shabbat* 133a. All Talmudic references will be cited from the Schottenstein edition of the Talmud, with my slight (non-referenced) modifications.

⁷ *Ibid*, 133b.

⁸ *Yad, Hilkhot Milah* 2:2.

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contemporaries, who shared the same medical frame of reference, namely, a Hellenic and Hellenistic system of medicine.⁹

Since this system is so unfamiliar to moderns, let me present a brief extract from a work I've consulted, *The Healing Hand—Man and Wound in the Ancient World*, by Guido Majno:¹⁰

The Greek physicians studied disease primarily by giving it a lot of thought [as opposed to observation]. The result was an overall, synthetic, but wholly imaginary theory of disease, in which the basic disturbance, and therefore the treatment, was always of the same kind, even in the case of a wound. The reasoning went about as follows. In nature everything is balanced. "Too much" or "too little" causes an imbalance, which is disease. The actual components of the body that may go out of balance are the celebrated four humors: blood, phlegm, yellow bile, and black bile. In the normal body these humors are harmoniously mixed; disease ensues if they are mixed in the wrong proportions, or if they become unmixed...[A]ny pain or lump could be explained as a "distemper" or disharmony of the blend... [B]lood was regarded as the worst offender, because it was liable to spill out easily and therefore to "stagnate." This was

⁹ I assume the readers of this journal do not need a primer on this very weighty issue of the fallibility of *HaZal*'s scientific pronouncements, especially in light of the enormous literature generated by the Slifkin ban. I would merely add that Prof. S. Sternberg's essay "Review of I. M. Levinger's *Guide to Masekhet Hullin and Masekhet Bekhorot in Bekhol Derakhbeka Dae'hu*, *Journal of Torah and Scholarship* 4, Winter 1997, pp. 84–102 and follow-up comments in *Bekhol Derakhbeka Dae'hu, Journal of Torah and Scholarship* 7, Summer 1998, pp. 99–101 represent my personal choice for elegance of expression and, of course, cogency of the arguments. As for the interface between Talmudic and Hellenistic medicine, please refer to the comprehensive review article by Meir Bar-Ilan, "ba-Refuah be-Eretz Yisrael be-Me'ot ha-Rishonot le-Sefirah," *Cathedra* 91 (1999) pp. 31–78, for extensive documentation of the dependency of our Talmudic Sages on the Alexandrian medical tradition. As a sampler of Talmudic material confirming this dependency, see *Bavli Bava Mezi'a* 107b where Rabbi Elazar attributes numerous ailments to an excess of bile, and *Bavli Bava Batra* 58b where Rabbi Bana'ah considers an excess of blood the major source of disease.

¹⁰ This long citation consists of material found on pp. 178–184, Cambridge, MA: 1976.

supposed to be dangerous, because one of the key propositions in Greek medicine maintained that stagnating blood will decay...and in decaying, it might even become pus...the parts around the wound will develop spasms, attract blood, become soaked with it, and decay. The beauty of this thought (corruption originates *around* the wound), however wrong it may sound today, is that it shows how the Greeks struggled to explain the mechanism of what we call infection—or in their terms, corruption. They could have no idea that the cause was something [micro-organisms] deposited on the surface of the wound. Therefore, using their principle that “stagnating blood decays,” they rationalized that the trouble had to arise all around the wound: *blood was attracted there, and turned into pus.* This thought is stated or hinted at may times in the Collection [Hippocratic Corpus]; for instance, “**all wounds draw their inflammation and swelling from the surrounding parts, because of the blood flowing into them. In every recent wound...it is expedient to cause blood to flow from it abundantly, for thus will the wound and the adjacent parts be less attacked with inflammation...when the blood flows they become drier and less in size, as being thus dried up. Indeed what prevents the healing...is the decay of the blood.**”

This doctrine, originally formulated by Hippocrates and his disciples,¹¹ received an enormous boost through its enthusiastic endorsement by the great second-century Alexandrian physician

¹¹ My attribution of this medical theory to Hippocrates should be understood in only a general sense, and I agree fully with the following quote: “The formidable reputation posthumously acquired by Hippocrates of Cos (circa 460 BCE.) had little factual basis. He may, as a successful physician, perhaps have composed a small part of the miscellaneous corpus of writings which bears his name. Quite probably, the collection was compiled from a variety of sources by scholars working in Alexandria during the third century BC; the fact that it became associated with a man singled out for praise by Plato and Aristotle because of his fame as a doctor encouraged others to accept and elaborate the legend of authorship.” C. Rawcliffe, *Medicine & Society in Later Medieval England* (UK: 1995), p. 30.

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Galen, whose works became synonymous with the practice of medicine for at least fifteen centuries.¹²

Preventing wound complications by “causing blood to flow from it abundantly” provides the objective for the practice of *mezizah* perfectly. It also clarifies the famous difficulty in Rambam’s formulation—what is Rambam’s source for the additional requirement “until the blood comes out of the distant places?” No mention of this requirement can be found in the Talmud’s discussion of *mezizah* cited above.¹³

It appears that the only commentator who actually understood this enigmatic Rambam is Rabbi Nachum Rabinovitch, who writes:¹⁴

The Rambam’s additional phrase explains the technique of *mezizah* necessary to avoid danger—“Until the blood exits from distant places.” This is similar to the technique expressed by Rambam in the first chapter of his work, “Poisons and Their Antidotes.” In that work Rambam refers repeatedly to the value of *mezizah* in treating a victim of a snake or scorpion bite. Without *mezizah* to draw out the poison, it would spread in the blood and reach the life-sustaining internal organs. If one succeeds in drawing the poison out from their distant places, before further spread, the danger is averted. Since the Rambam ruled that a metal

¹² “[T]he attention and praise lavished upon them [Hippocratic Corpus] by Galen, a towering figure in the medieval medical pantheon, bestowed a lasting imprimatur.” *Ibid.*

¹³ Although Owsei Temkin, the great historian of medicine, has characterized the Rambam as “the severest theological and philosophical censor of Galen,” he also quotes the Rambam’s statement “related to the medical science, as he [Galen] is the chief of this science and has to be followed in it; but his opinions ought to be followed in medicine and in nothing else.” Rambam rejected Galen’s non-medical philosophical musings, but was most certainly a Galenic physician. See Temkin’s *Galenism, Rise and Decline of a Medical Philosophy*, p. 123 and pp. 77–78, respectively, Ithaca and London: 1973.

¹⁴ Nachum E. Rabinovitch, *Mishneh Torah ‘im Peirush Yad Peshutah, Sefer ‘Ahavah*, Volume 2, p. 1274, Jerusalem: 1984. The translation provided is my own, and is non-literal for the sake of clarity.

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blade instrument is preferred for *brit milah*, and *Hasidim* in *Yevamot* 76a teach us that iron causes inflammation, it is evident why *mezizah* is needed.

Rabbi Rabinovitch's comparison of *mezizah* following *brit milah* to *mezizah* following a toxic bite indicates an awareness (though unstated) that the bleeding following a *brit milah* is equivalent to a toxin, a notion that is sensible only in the Greek model outlined above—blood becomes attracted to a wound and subsequently decays into pus.

Now, one of the points of contention between the pro-and anti-MBP forces centers on whether the medical benefits of the MBP procedure outweigh any possible risk associated with its performance.¹⁵ Those advocating MBP maintain that the medical necessity for its performance continues in force, and so they (not cognizant of the actual Hippocratic origin of the practice) are constrained to provide a basis for its therapeutic effect.

What then are the rationales offered for *mezizah*? At the beginning of the twentieth century, Rabbi C. C. Medini summarized the possibilities for the nature of the danger prevented by MBP:

1. Infection, transmitted either by the *mohel*'s hands or instruments, is the danger that is eliminated by the act of MBP.¹⁶

¹⁵ Analysis of precisely this aspect of the issue is the focus of the paper by Shabtai and Sultan cited above in bibliographical note 5.

¹⁶ "It is known that the air is filled with tiny creatures called bacilli, and it is also known that when these creatures enter an open wound they can endanger the patient. So too, the contact from the hands of a person in which an evil spirit is known to dwell on them, as well as the pressure of the knife in cutting off the foreskin, may cause the toxin to enter the internal organs of the newborn infant undergoing a *brit milah*. Therefore, *Hasidim*, in the depth of their wisdom and from whom no secret was concealed, instituted the process of MBP so that if any toxin enters the organ, it can be extracted. This is what is referred to as 'antisepticus.'" (*Sdei Hemed*, vol. 8, p. 440.) Shabtai and Sultan (cited above in note 5, p. 36) seem to endorse this theory: "From a modern medical perspective, one could speculate that since sterilization was not

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2. Swelling and inflammation is in some unspecified manner reduced by MBP.¹⁷
3. Excessive hemorrhage from the wound is the danger prevented by MBP.¹⁸
4. Unbearable pain, which is alleviated by the anesthetic effects of MPB.¹⁹

Of course, from a 21st century medical perspective, none of these possibilities have any resonance. Aware of the complete lack of cogency in these explanations, a modern proponent of MBP, Dr. Mordechai Halperin, rejected them all. Dr. Halperin has excellent credentials—he is a graduate of Ponevez Yeshiva and Hadassah Medical School as well as a recipient of an undergraduate degree in Mathematics and Science from Hebrew University. Currently he is an editor of *Assia*, a publication of the Falk Institute of Jewish Medical Ethics at Sha'arei Zedek Hospital, and serves a Chief of Medical

possible, the purpose of *mezizah* was to remove any bacteria that may have accumulated on the wound during the *milah*.” I am puzzled by this comment, because it seems to indicate that *Hasidim* were aware of the existence of bacteria. If that was the case, why were they unconcerned with the abundant bacterial population found in everyone’s mouth? Alternatively, their comment could mean that through trial and error, MBP was instituted as the most effective anti-bacterial available. But this claim is also erroneous, since there are ancient folk-remedies that are far superior to saliva in their anti-septic properties, and do not present the risk of inoculating the infant with the *mobel*’s oral, gingival or blood-borne micro-organisms. See, Majno, cited above, who demonstrates that wine by itself—“the commonest item in wound treatment since the Greeks” is an effective anti-microbial (p. 186).

¹⁷ “When one cuts a finger and immediately performs oral suction on the cut, the swelling and inflammation passes.” (*Sdei Hemed*, vol. 8, p. 440.) Exactly how swelling and infection are affected by MBP is left to the reader’s imagination.

¹⁸ “Because of the pressure and pulling of the skin, the blood vessels constrict after MBP and the blood does not flow in any greater amount than is absolutely necessary.” (*Ibid.*)

¹⁹ “Without the soothing consequences of MBP, the intense pain following the circumcision might cause grave harm, even death, to the infant.” (*Ibid.*)

Ethics at Israel's Ministry of Health—and he certainly recognized the utter failure in these traditional explanations of the medical purpose of MBP.

His solution was to propose an entirely novel theory—MBP was not intended to counter the danger of post-*milah* hemorrhage by **constricting the blood vessels** (as postulated in one of the traditional explanations outlined above). Instead, MBP was needed for the very opposite effect—**dilatation of the blood vessels** so that the complication of penile necrosis could be avoided.²⁰

Dr. Halperin based his theory on two Israeli cases of penile necrosis following *brit milah* that resulted in malpractice litigation brought against the *mohelim* responsible for those tragic outcomes. Plaintiff's experts in both cases attributed the horrific complication to poor technique by the *mohelim*—either they negligently extended the foreskin cut into the glans itself at the time of the *brit milah*; or, alternatively, they applied the post-*milah* wound dressing too tightly and thereby constricted the arterial supply. Dr. Halperin's own analysis of the evidence in those two cases (based primarily on his confidence in the extensive prior work experience of the *mohelim* involved) caused him to reject both those possibilities. He posited that those two infants likely suffered from congenital anomalies of their penile arterial system, which placed them at grave risk for necrosis and gangrene, and blame should not have been assigned to the *mohelim*.

Dr. Halperin further buttressed his theory by using the expert testimony of a Dr. Gonen, a general surgeon as well as a *mohel* with 25 years experience, regarding the incident of an infant who developed clinical evidence of compromised penile blood supply following a *brit milah* he had performed in 1980. Dr. Gonen recounted how he successfully treated this complication by immersing the infant in hot water for forty minutes, repeating this process every two hours over a period of several days. The vasodilatation induced by the hot-water bath restored adequate

²⁰ Dr. Halperin's essay “*Mezizah u-Rebizah le'achar Brit Milah: Ta'alumot Refu'iyot u-Pitronon*” appeared originally in *Sefer Rapha'el*, edited by HaRav Y. E. H. Movshovitz (Jerusalem: 2000), pp. 161–176. An expanded version of the essay appeared in the periodical *Shanah be-Shanah*, 2001.

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circulation, and the infant was spared the complication of penile necrosis.

Dr. Halperin surmised that avoiding this complication was exactly the rationale for the ruling by Rabbi Elazar ben 'Azariah that infants be bathed in hot water on the third day following a *brit milah*, even if it is *Shabbat*.²¹ This requirement was so absolute that he also permitted heating the requisite amount of water on *Shabbat* itself, if necessary. This ruling, allowing desecration of the Sabbath to prepare hot water so that the child might be bathed, was codified by Rif²² and Rambam,²³ as well as by the Tur.²⁴ Rabbi Joseph Karo, however, dissents in both his commentary to the Tur and his formulation in the *Shulhan Arukh*.²⁵ This dissent, for which Rabbi Karo provides no precedent whatsoever, is understood as based on the principle of "*shinui ha-teva*." Bathing following *brit milah* is no longer critical for the health of the infant, because either the nature of people or the nature of illness has changed.²⁶ Dr. Halperin's analysis proceeds from the premise that there are major geographic variations in the frequency of congenital malformations of the penile blood supply. In Rabbi Karo's bailiwick, the complication leading to penile necrosis was simply not encountered, and desecrating the Sabbath to ensure adequate hot water for the newly circumcised infant was therefore no longer justified.

Dr. Halperin is convinced he has rediscovered the reason *Hazal* mandated MBP—it is simply the most effective manner of preventing penile necrosis. Oral suction creates a vacuum at the site of the *brit milah*, and the differential pressure between the distal capillaries and the more proximal arteries ensures that these delicate arteries remain patent and free of thrombosis.²⁷

²¹ Talmud *Bavli*, *Shabbat* 134b.

²² *Ad loc.*

²³ *Yad, Hilkhot Milah* 2:8; *Hilkhot Shabbat* 2:14.

²⁴ *Tur, Orah Hayyim* 331:1.

²⁵ *Orah Hayyim* 331:9.

²⁶ See N. M. Gutal, *Sefer Hishtanut ha-Tevot*, pp. 48–52, Jerusalem: 1998.

²⁷ Dr. Halperin claims that this explanation was originally given by Rabbi Yaakov HaGozer (the cognomen *HaGozer* refers to his occupation), a twelfth-century German *mohel* who wrote *Kelalei ha-Milah* (brought to print for the first time in 1892 by Yaakov Glassberg in Berlin). In that work, Rabbi Yaakov writes (on p. 20) that *mezizah* is necessary to

Dr. Halperin's ingenuity notwithstanding, the theory fails on historical and physiological grounds. As incredible as it appears to the modern mind, the purpose and function of the heart and circulatory system were completely misunderstood by the ancient and medieval medical experts. The liver was considered the central organ of the vascular system, responsible both for producing all of the body's blood and for then dispatching it to the rest of the body via a network of veins. Once reaching its local destination, the blood was **entirely** absorbed by the local tissue. This absorption supplied the necessary nourishment to meet the body's needs. The arterial system, on the other hand, primarily contained and distributed the life-sustaining "*pneuma*," derived from air inhaled by the trachea and then transformed by the heart into this vital "life-force."²⁸ The arterial and

prevent blood from clotting in the urethral meatus. I believe an objective reading of this comment indicates nothing more than ensuring that the urinary stream is not impeded by a post-*milah* blood clot. The notion that Rabbi Yaakov was concerned about penile necrosis is a modern projection on an unremarkable medieval observation. This technique of seizing upon a stray Talmudic or post-Talmudic comment and re-casting it as a profound modern scientific insight is quite common in *Haredi* circles. A particularly good example of this was Rabbi Shlomo Miller's December 2005 attack on R. Slifkin, in which Rabbi Miller claimed the phenomena of the wave-particle duality of light and quantum non-locality entanglement were known by Jewish sages long before physicists were aware of those notions.

²⁸ Edward Reichman, "The Halakhic Definition of Death in Light of Medical History," *The Torah U-Madda Journal*, Volume Four, 1993, pp. 149–173, especially p. 150. As we have come to expect of Dr. Reichman, whose contribution to the field of the history of medical halakhah is enormous, this article is both comprehensive in its general historical and halakhic content and is completely free of any apologetics. But there is one additional obscure reference that was apparently unknown to Dr. Reichman. In 1915, the Rabbi of Temple Israel in Wilmington, N. C., Rabbi S. Mendelsohn, published an article in the *Charlotte Medical Journal* entitled "The Arterial Function and the Circulation in Ancient Rabbinic Literature." The article was subsequently published by the author as a 32-page booklet, and he mailed a hand-corrected copy of the work to the Jewish Theological Seminary. The author cites the Talmudic requirement that *Shehitah* be performed in the ventral-to-dorsal direction as proof that the Talmudic

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venous systems were thus separate and distinct; hence there was no “circulatory” cardiovascular system to speak of until 1628 when the English physician William Harvey published his revolutionary *Exercitatio Anatomica De Motu Cordis et Sanguinis in Animalibus*.²⁹ The celebrated dispute between Rabbi Zvi Ashkenazi and Rabbi Yonatan Eibeschutz, over the *kashrut* of a slaughtered chicken whose heart could not be found, indicates that even as late as nearly a century following William Harvey’s discovery of the systemic circulation, rabbinic authorities were still apparently unaware of the true role of the heart and arterial system.³⁰

As for Dr. Halperin, he feels no need in his article to attempt to prove that *HaZal* were familiar with the structure and function of the arterial system. He does argue forcefully that *HaZal* made significant advances over the prevailing medical knowledge in the following conditions: Hemophilia and its exclusively maternal genetic

Rabbis were aware of the critical role of the carotid arteries. However, the actual state of *HaZal*’s acquaintance with these matters can be found in ‘Amaimar’s statement in *Hullin* 45b that “there are three pipes: one splits off to the heart, one to the lungs, and one to the liver.” Even a *Hareidi* author such as Rabbi Yaakov Dovid Lach is forced to acknowledge the grave difficulties in both the Gemara’s teaching and Rashi’s commentary, which indicate that the trachea leads directly into the heart. See p. 155 in his *Sefer Temunei Hol*, *Hullin Illuminated*, HaMesivta Publications, Jerusalem: 2003, where Rabbi Lach also concedes that this same faulty anatomic scenario is explicitly adopted by the *Shulhan Arukh* and the *Rema*, *Yoreh De’ah* 34:10. This issue is treated in great detail by Sternberg (cited above in note 9) on pp. 88–92. The first unequivocal reference to Harvey’s discovery in Jewish literature can be found in the Hebrew medical tome *Ma’ase Tuviah*, published in Venice in 1707.

²⁹ There are historians who have credited the Italian physician Andreas Cesalpinus with anticipating much of Harvey’s research, but being deliberately unacknowledged by the Padua-trained Englishman. “In 1571 Cesalpinus published his *Peripateticum questionem libri quinque*, in which he assumes a constant and physiological transit of the blood from the arteries to the veins through the ‘vasa in capillamenta resoluta’ to every part of the body.” L. Luciani, *Human Physiology*, Vol. 1, p. 157, London: 1911.

³⁰ See Reichman, cited above in note 28, p.160, for the section titled “The Hakham Zevi and the ‘Heartless’ Chicken.”

transmission; Neonatal Hemolytic Anemia; and Hypospadias. In a subsequent article he presents a comprehensive treatment of *HaZal's* scientific knowledge entitled “Science and Medicine in the Talmud—Tradition or Reality?”³¹ But he never supplies evidence that the true nature of the vascular system was so well understood that MBP was instituted to ensure that the local blood supply would remain uncompromised, simply because no such evidence is available.

Just as Dr. Halperin’s theory fails on historical grounds, so too does it fail on its physiological premises. For the pressure in the proximal arterial supply to register a change, the vascular tone in the **entire** distal capillary bed would have to change. Applying a moment’s suction to the superficial capillaries via the technique of MBP would never affect the vascular tone of the entire capillary bed, and so it would cause no increased flow in the proximal arteries. To cause dilatation of the entire local capillary bed, either a pharmacologic approach should be utilized, such as the administration of vaso-dilating agents, or Dr. Gonen’s hot-water immersion technique would be a possible alternative.

Despite my critique of Dr. Halperin’s explanation of the medical benefits of *mezizah*, it is critical to elaborate on his response to the by-now-famous August 2004 article published in *Pediatrics* that presented a series of eight infants who apparently contracted Herpes Simplex following MBP.³² Dr. Halperin, in his position as Chief Medical Ethics Officer at the Ministry of Health, convened a number of high-level meetings with *mohelim* and rabbinic authorities to lessen the risks of *mohel*-to-baby transmission.³³ His behavior provides a notable contrast to the American *Hareidi* response, which was primarily one of launching a campaign of vilification and demonization of the investigators associated with the paper.³⁴

³¹ *Assia*, Volume 18, Kislev 2003, pp. 90–104.

³² See the full citation in note 4.

³³ All of this is detailed in a Memorandum prepared by Dr. Halperin and shared with members of the Ministry of Health and the Rabbinic Board tasked with supervising *mohelim*. I thank E. Bohm, editor of the periodical *Halacha Berurah*, for providing me with a copy.

³⁴ Especially Rabbi MD Tendler, who I assume had no involvement in gathering or interpreting the clinical data, but consulted only on the

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Although Dr. Halperin enjoyed some initial rabbinic support in his efforts, once “community activists” became involved, any possibility of modifying the risk factors associated with MBP was thwarted.³⁵

At this point, we are left with no alternative but to invoke the authority of Hippocrates and Galen as a rationale for performing MBP, which should give the Jewish community pause, especially in light of the *Herem ha-Kadmonim* regarding the continued utilization of Talmudic remedies.³⁶

halakhic and historical background of MBP. I am, of course, not justifying the egregious comments made by Rabbi Tendler in the course of this controversy (examples can be found in Zwiebel’s article cited in footnote 4). In many ways Rabbi Tendler’s role in this matter can be characterized by the popular expression “With friends like these...” The campaign defending MBP was promoted vociferously by *Hareidi* print media and included mass mailings and broadsides plastered throughout *Hareidi* neighborhoods, which Zwiebel (*ibid.*, p.15) characterized as “shrill, hyperbolic overdrive.” For example, one broadside that I personally viewed on display in Borough Park had the following text (paraphrased from *Be-Midbar* 25:4) printed in bold blood-red type: “Take all the oppressors of the people and hang them before *Hashem*, facing the sun.”

³⁵ The entire saga is described in the Memorandum cited in note 33.

³⁶ See the discussion in Gutal (above, note 26) pp. 43–46 for a full analysis of this topic. Of course, I am aware that advocates of MBP insist on characterizing it as a component of the *mitzvah* of *brit milah*, but no credible reading of the Talmudic or post-Talmudic texts can deny that the essential feature of MBP—“preventing a danger to the infant”—represents a therapeutic intervention. Perhaps, after being made aware of how MBP fits so completely into the medical framework of the Talmudic period, some undecided interpreters may be convinced that the texts really mean what they say and that MBP was intended only as a medical procedure.